REMARKS

The Invention

The present invention is a rotary disc pump for pumping fluids and mixtures of fluids and solids. The device (Figure 1) has a housing which is a chamber that comprises front (16) and a back (14) walls and peripheral walls (18). A tangential outlet (22) is formed in one of the peripheral walls (18).

An impeller 28 is mounted co-axially within the chamber. The impeller comprises a shaft 24 mounted in the back wall 14 of the chamber. The shaft has an inner end which extends from the back wall of the chamber. The outer end of the shaft extends into the chamber toward the front wall 16 of the chamber.

At least a first circular disc 30 is mounted on the inner end of the shaft, and at least a second disc 32 mounted in axially spaced relation to the first disc. The disc(s) have an opening formed in their center. A converging member 44 extends co-axially from the inner end of the shaft from the first disc and converges toward a point at least one half the distance to the second disc 32.

Section 102 Rejection

The Examiner rejected claims 1-5, 7, 10, 12-17 and 21 under 35 USC 102(b) as being anticipated by Possell, A Noiseless Fan (U.S. 5,192,182). Applicant traverses.

In order for a single reference to anticipate, each limitation of a claim must be found in that single reference. With reference to claim 1, as amended above, the housing of the present invention is limited to a chamber formed from a front wall, a back wall and peripheral wall joining said front and back walls. A generally tangential outlet is formed in said peripheral wall. Possel does not disclose the limitation of a housing formed as a chamber. Instead, Possell, which is an electric fan, discloses a partial enclosure open to the atmosphere completely around its periphery.

Claim 1, as amended above, reads:

> 1. (amended) A rotary disc pump for pumping fluid materials, comprising: a housing having a front wall, [and] a back wall and peripheral wall joining said front and back walls forming a chamber with a generally coaxial inlet in said front wall and a generally tangential outlet formed in said peripheral wall; an impeller mounted co-axially within said chamber and comprising a shaft mounted in said back wall of said housing and having an outer end extending from said housing and an inner end within said chamber, at least a first circular disc mounted on the inner end of said shaft, and at least a second disc mounted in axially spaced relation to said first disc and having an opening in the center thereof; and a converging member extending co-axially of said shaft from said first disc converging toward a point at least one half the distance to said second disc.

Possell discloses a partial enclosure formed from a back wall 17 and a front wall 14. Stand-off bolts 18 interpose between the front and back walls (column 1, line 68 – column 2, line 2). Possell's housing is open to the atmosphere completely around its periphery. In fact, Possell's claim 1 recites the housing of the fan as a partial enclosure formed by the spaced relationship between a first and second wall. Possell's electric fan, in operation, moves air radially out of the partial enclosure which is open at its periphery to the atmosphere.

The Possell electric fan requires a partial enclosure open all the way around its periphery for moving or discharging air radially into the atmosphere. If the housing of the Possell electric fan was a chamber, as claimed in the present invention, the walls of the chamber would obstruct the radial discharge of air.

The present invention is a pump for moving highly viscous materials and fluids containing solids (paragraph 0004). The Examiner has mischaracterized the Possell device by stating that it discloses a rotary disc pump for pumping fluid materials. In fact, Possell discloses a fan for moving air into the atmosphere. Possell's open-to-the atmosphere, partial enclosure could not function as an impeller of viscous fluids into a discrete outlet.

Accordingly, the claimed housing which is formed as a chamber is not found in or suggested by the Possell reference. This is enough to negate anticipation by Possell. Withdrawal of this rejection and advancement of the pending claims toward allowance is respectfully requested.

Respectfully submitted,

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